

<b>NWS FORM E-5</b> (11-88) (PRES. BY WSOM E-41)	<b>U.S. DEPARTMENT OF COMMERCE</b> NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) <b>WFO Jackson, Mississippi</b>
<b>MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS</b>		REPORT FOR: MONTH                      YEAR <b>December                      2002</b>
TO:      Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE <b>Alan Gerard, MIC</b> <b>In Charge of HSA</b>  DATE <b>January 10th, 2003</b>

*When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOME-41)*

**Synopsis...**

An El Nino pattern with the associated strong southern jet stream characterized the month of December. Gulf lows and strong upper air disturbances moved across the HSA during the month. From the 3<sup>rd</sup> through the 5<sup>th</sup>, a combination of a stationary frontal boundary over central Mississippi and a gulf low pressure system pushing through southern Louisiana into southern Mississippi produced locally heavy rainfall amounts. Rainfall amounts ranged from 1 to 3 inches with the heaviest occurring over western and northwestern portions of the HSA. From the 9<sup>th</sup> into the 11<sup>th</sup>, an upper air low pressure trough moved through the area. Rainfall amounts varied widely across the HSA. Amounts ranged from less than .25 inches to 2 inches. From the 13<sup>th</sup> through the 14<sup>th</sup>, a fast moving upper air disturbance and an associated gulf low pressure system moved through the HSA. Rainfall amounts were generally less than 1 inch. On the 19<sup>th</sup> into the 20<sup>th</sup>, a fast moving cold front pushed through the area. Rainfall amounts were generally an inch or less; however, some amounts from 2 to 4 inches were reported over southeastern and eastern Arkansas.

The most intense system of the month pushed through the area from the 23<sup>rd</sup> into the 24<sup>th</sup>. A strong upper disturbance and a associated strong gulf low pressure system moved through central Mississippi. Rainfall amounts were locally heavy, ranging from 1 to 4 inches. One day rainfall totals for the 24<sup>th</sup> were as follows: Crandall, MS 4.00 inches; Dermott, AR 3.85 inches; Raleigh, MS 3.47 inches; Hattiesburg, MS 3.45 inches; Oak Ridge, LA 3.31 inches; Philadelphia, MS 3.22 inches; Purvis, MS 3.17 inches; Winnsboro, LA 3.00 inches; and Crossett, AR 3.00 inches. From the 30<sup>th</sup> into the 31<sup>st</sup>, a cold front pushed across the area. Rainfall amounts varied widely over the area from less than .25 inches to near 2 inches in some locations.

**River and Soil Conditions...**

Rainfall for the month was above normal over northeast Louisiana, southeast Arkansas, and northwest, east central and southeast portions of the HSA in Mississippi. At or below normal rainfall prevailed over southwest and central portions of the HSA in Mississippi. Soil moisture conditions at the end of the month remained well above normal even in areas where rainfall was below normal. Minor flooding occurred on the Big Black, Big Sunflower, Pearl, Chickasawhay, Tuscolameta Creek, and Yalobusha Rivers.

With above normal rainfall expected over the next several months, flood potential for HSA rivers should remain high. See the December E-3 report for information on flood crests.

Rainfall for the month of December...

<u>RIVER BASIN</u>	<u>RAINFALL</u>	<u>DEPARTURE FROM NORMS</u>
Southeast Arkansas (Chicot & Ashley counties)	6.00 to 10.50 inches	Above to much above normal.
Northeast Louisiana (Tensas, Boeuf, Bayou Macon & Lower Ouachita)	6.75 to 8.00 inches northern sections  8.00 to 9.00 inches central sections  6.75 to 10.25 inches southern section	Above normal to much above normal.  Much above normal.  Much above normal
Lower Yazoo	6.25 to 8.75 inches	Above to much above normal.
Big Black	5.00 to 6.25 inches upper  5.00 to 7.50 inches lower and middle sections	Just Below to above normal.  Below to near normal over middle sections to above normal lower sections.
Homochitto/ Bayou Pierre	5.00 to 6.00 inches	Just below to near normal.
Pearl (abv Jackson)	5.25 to 8.50 inches	At or below normal over all of the basin except above normal over the Tuscolameta Creek basin.
Pearl (Blo Jackson)	4.00 to 6.00 inches	Below to near normal.
Pascagoula	5.00 to 10.50 inches over the Leaf basin.  7.00 to 8.00 inches over the Black Creek basin.  6.50 to 10.00 inches over the Chickasawhay	Near Normal to much above normal.  Much above normal.  Above to much above normal.
Tombigbee tributaries in the JAN HSA	5.00 to 9.00 inches	Near Normal to much above normal.

The heaviest rainfall amounts in the HSA for the month were: 10.69 inches at Dermott, AR; 10.37 inches at Hattiesburg, MS; 10.33 inches at Crandall, MS; 10.30 inches at Clayton, MS; 10.19 inches at Laurel, MS; 9.49 inches

at Quitman, MS; 9.12 inches at Kipling, MS; 9.10 inches at Crossett, AR and 8.81 inches at Lexington, MS.

Here at the Jackson WFO, the December monthly rainfall was 6.30 inches, which was 0.96 inches above normal. The Jackson rainfall total for 2002 was 68.42 inches, which was 12.47 inches above normal. This was the 7<sup>th</sup> wettest year on record for Jackson, MS.

At the Meridian Airport, the December monthly rainfall was 7.92 inches, which was 2.61 inches Above normal. The Meridian rainfall total for 2002 was 57.93 inches of rain, which was 0.72 inches below normal.

#### *Mississippi River...*

The Mississippi River from Arkansas City, AR to Natchez, MS began the month falling, reaching its lowest stage for December around the middle of the month. The river experienced a rise from mid month and crested at all points during the last 4 days of the month. For Arkansas City and Greenville, the first three fourths of the month were below seasonal norms with the remainder of the month being above seasonal norms. Vicksburg and Natchez were both above seasonal norms for the first week and last 10 ten days of the month and below seasonal norms during the middle portion of the month.

The provisional high and low stages for December are listed below:

Location	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	24.80	12/26	5.10	12/13
Greenville, MS	36.09	12/27	16.34	12/13
Vicksburg, MS	31.25	12/28	10.41	12/15
Natchez,MS	38.90	12/29	18.48	12/15

#### *Products issued...*

Total Flood Warning products issued: 18

Total Flood Statement products issued: 92

Daily Rainfall Products (RRA'S) issued 31

Daily River Forecast Products (RVS'S) issued 31

Daily River Stage products (RVA'S) issued 31

Marty V. Pope  
Service Hydrologist

Note: Stage and precipitation data was furnished with cooperation from Mississippi, Louisiana, and Arkansas, N.W.S. Cooperative Observers, United States Geological Survey, United States Army Corps of Engineers and the Pearl River Valley Water Supply District, Pat Harrison Waterway District, and the Mississippi Department of Environmental Quality.

cc: *USGS Little Rock District*  
*USGS Ruston District*  
*USCE Mobile District*  
*USCE Vicksburg District*  
*USCE Mississippi Valley Division*  
*USGS Mississippi District*  
*SRH Climate, Weather and Water Division*  
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*Pearl River Valley Water Supply District*  
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